CLAIMS

1. A textile material that comprises an HF transponder (12) that comprises a circuit module (16) and an antenna (14; 18, 20) linked therewith and set to a working frequency, **characterised in that** the antenna is configured as an E field radiator for a working frequency in the UHF or microwave range, and the E field radiator is completely constituted of electrically conductive components of the textile material itself.

2. The textile material according to claim 1, **characterised in that** the electrically conductive components of the textile material can comprise electrically conductive printing paste or electrically conductive thread constructions that can be processed by machine as part of an industrial production process that is customary with textiles.

3. The textile material according to claim 1 or 2, **characterised in that** a mechanically shortened E field radiator is made to resonate with the working frequency by inductances and/or capacitances whose geometry is compatible with the industrial production process that is customary with textiles.

4. The textile material according to claim 2 or 3, **characterised in that** the electrically conductive thread construction is a metal-coated synthetic thread, a synthetic thread around which a metal wire or a stranded metal wire is wrapped, a synthetic thread with an integrated metal wire or an integrated stranded metal wire, or a graphite thread.

5. The textile material according to any one of claims 2 to 4, **characterised in that** in the production process

of weaving, inductances are made to meander, with such meandering being achieved by a continuous electrically conductive weft thread, which between each weft extends parallel to the warp threads along a distance on the respective selvedge, which distance corresponds to the thickness of several weft threads.

6. The textile material according to any one of claims 2 to 4, **characterised in that** in the production process of weaving, inductances are made to meander, with such meandering being achieved by the combination of electrically conductive warp threads and weft threads which at their points of intersection are galvanically connected.

7. The textile material according to any one of claims 2 to 6, **characterised in that** in the production process of weaving, capacitances are formed by adjacent electrically conductive warp threads and/or weft threads that among each other are galvanically and/or capacitively connected.

8. The textile material according to any one of claims 2 to 7, **characterised in that** antenna connections between the circuit module and the radiator can be implemented by means of connections involving crimping, welding, soldering, or gluing with the use of conductive adhesive.

9. The textile material according to claim 8, **characterised in that** in the production process of printing, the printing paste itself is the conductive adhesive.

10. The textile material according to claim 8 or 9, **characterised in that** adhesive surfaces of the

adhesive connections are UV-permeable, and the conductive adhesive is UV-curable.

11. The textile material according to any one of claims 2 to 10, **characterised in that** the circuit module (16) itself and its antenna connections are enclosed by a casting compound, and the casting compound at the same time is connected to that region of the textile material, which region is adjacent to the circuit module, for mechanical attachment of the circuit module and/or for improving security against tampering.

12. The textile material according to any one of claims 1 to 11, **characterised in that** the radiator is designed as a symmetrical dipole (14) or as an asymmetrical bar (18) with a counterweight (20).